



**ABU DHABI WATER AND ELECTRICITY
AUTHORITY (ADWEA)**

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Volume	Chapter	Version
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HSE KEY PERFORMANCE INDICATORS

Approved by:

Planning & Development Director:



**ADWEA
Performance Management
HSE Key Performance Indicators**

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DIRECTOR



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1. Introduction

Based on their commitment towards HSE, ADWEA General Management adopted the continuous improvement of HSE performance by applying even stricter control on all aspects of HSE in line with industry best practices, stakeholders and legislative requirements.

Accordingly, these HSE KPIs have been developed to provide information and feed back on what's happening so that we can shape our actions to respond to changing circumstances.

KPIs provide information on:

- What's happening around us
- How well we are doing
- What's happened so far
- Impending problems or dangers

It should be noted that this is still an early-stage set of HSE KPIs. As performance management evolves, some KPIs will be refined further and others may be dropped or replaced in accordance with performance requirements.

It should also be noted that in addition to these new 'HSE performance management reporting' requirements, existing HSE reporting requirements will continue unchanged for the time being. These requirements are:

- Monthly and annual HSE reporting from all Group Companies.
- Incident reporting in accordance with "ADWEA Procedure".

Performance will be measured against yearly logical & achievable set targets (i.e. targets for the coming year has to be set during Oct/Nov of the present year). Copies of such targets have to be sent to ADWEA Planning & Development Directorate, after being approved by the Group Company Management.

2. Reactive Indicators:

Definitions herein for the two safety/health KPIs (fatalities and LT injury frequency) are those in ADWEA Incident Reporting, Investigation and Analysis Procedures.



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2.1 Fatalities

Definition:

A fatality is the death of a Company or Contractor employee due to work related injury or illness (see also note below on third party personnel).

Fatal Incident Frequency Rate (FIFR) is the number of fatalities per 100 million man-hours worked i.e. $FIFR = \frac{\text{number of fatalities} \times 100,000,000}{\text{man-hours worked}}$

KPI:

Number of fatalities (company and contractor employees)

Explanatory notes:

- i) Refer to Appendix A for definitions of 'Company Employee', 'Contractor' and 'Contractor Employee'.
- ii) Companies should submit separate figures for Company Employees, Contractor Employees and third party personnel as well as a combined figure for Company plus Contractor employees. This will enable more meaningful benchmarking to be carried out. The KPI will be expressed in terms of total fatalities (company employees plus contractor employees). Note that 'third party fatalities' is a reporting requirement only and not part of the KPI.

2.2 Lost Time Injury Frequency

Definition:

A Lost Time Injury (LTI) is a work related injury or illness, which prevents that person from doing work the day after the incident/injury.

Lost Time Incident Frequency (LTIF) is the number of lost time injuries (fatalities - lost time injury) per 1,000,000 (million) man-hours divided by the number of man-hours worked (exposure hours).

KPI:

Lost Time Injury Frequency (LTIF) for company plus contractor employees.

Explanatory notes:

- i) Lost Workday Case (LWDC) includes work-related injury or illness. Refer to definitions of the following in Appendix A:
 - Lost workday case (LWDC)



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- Occupational illness qualifying as occupational injury
- Occupational injury

ii) Companies should provide separate figures for company employees and contractor employees as well as a combined figure for company plus contractor employees. This will enable more meaningful benchmarking to be carried out. The KPI will be expressed in terms of overall LTIF (company plus contractor employees).

2.3 Environmental KPIs

The implementation plan for the performance management system proposed four environmental KPIs:

2.3.1 Spills

Definition:

A spill is any unexpected/accidental loss to fresh water, sea or land of crude oil, crude products or hazardous chemicals (irrespective of the amount recovered). Individual spills to land or sea of less than one barrel are not reportable to ADWEA

Spills that are wholly contained by impervious surface e.g. non-cracked concrete and good condition bitumen bunds should be excluded. Clay and earth bunds are not considered impervious.

Leaks are non-instantaneous spills and should also be reported.

The magnitude of spills should be categorised. For example, spills between 1-100 bbls, 100-1,000 bbls, 1,000-10,000 bbls and greater than 10,000 bbls should be recorded separately. By categorising the spills in terms of volume it is possible to compare like with like.

KPI:

Number and volume of crude, crude products or hazardous chemical spills which are not wholly contained and reach the receiving environment. Targets will be set in relation to operating history and spill experience.

- Spills prevention and control
- Records and reporting

Explanatory note:



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Difference in eco-toxicities of oil and some chemicals could be quite significant, i.e., the release of a small amount of a particularly toxic chemical may have a more significant negative environmental impact than the release of a relatively large amount of crude oil. This point will be addressed in future revisions of the performance management system

2.3.2 Waste

Definition:

Municipal Waste: Inert or non-hazardous waste produced through everyday non-industrial operations and living. Examples are paper, cardboard, plastic bottles, metal tins/containers, kitchen wastes etc.

Non-Hazardous Industrial Waste: Any waste generated by industrial processes or civil activities that is not classified as hazardous. Examples are masonry and brick rubble, wood and metal etc.

Hazardous Waste: Substances that pose a present or future threat to man and/or the environment which are unwanted and economically unusable and which exhibit one or more of the following characteristics: Ignitable, Corrosive, Reactive or Toxic

Radioactive: Any waste containing radionuclide (i.e. a nuclide that is radioactive)

Medical Waste: Any waste which is generated in the diagnosis, treatment, or immunization of human beings, in related research, biological productions, or testing.

KPI:

Calculated amounts of generated wastes reported in the monthly reports.

- Waste production minimization efforts – reduce / re-use / recycle
- Storage – labelling / packing / segregation
- Records and reporting

2.3.3 Emission Gases

Definition:

Emissions of CO, CO₂, SO_x, NO_x, CH₄ and VOC to air from any source.

KPI:

Calculated estimate of CO, CO₂, SO_x, NO_x, CH₄ and VOC emissions (mtonnes) to air.

- Emissions reduction
- Records and reporting



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2.3.4 Effluents/Discharges

Definition:

Physical & Chemical properties of the water being discharged to sea or desert and the trace metals present in this discharged water.

KPI:

Calculated estimates from samples analysis taken for all the parameters under the above definition.

- Effluent quality improvement efforts
- Records and reporting

3. Pro-active Indicators

3.1 HSE Audits / Inspections

KPI:

- Number of audits / inspections
- Follow-up plans, records and implementation
- Coverage of various areas, subjects.

3.2 HSE Training

KPI:

- Selection of courses and relevance to job and accidents
- Follow-up and records of individual training
- Frequency of conduction / refreshers
- Review of courses and assessment

3.3 Near Misses

KPI:

- Number of Near misses reported & closed out

3.4 Risk Identification & Assessment

KPI:

- Is there a plan / program?
- Who conducts the survey? Frequency?
- Implementation and follow-up



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3.5 HSE Impact Assessment (HSEIA)

KPI:

- Number of projects with HSEIA completed against total projects/modifications that require an HSEIA.

3.6 Emergency Drills / Exercises

KPI:

- Nature : Internal, with other companies, authorities
- Frequency
- Emergency center and communication facilities
- Emergency plans
- Records / log books

3.7 HSE Campaigns

KPI:

- HSE Man of the month nomination: are they consistent periodically?
- HSE suggestions: frequency, follow-ups, encouragement program.
- HSE posters: quantities, quality, subject and area coverage
- Special campaigns: frequency, feedback, follow-up

3.8 Management of Contractors

KPI:

- Inspection of contractors' facilities and activities are conducted? Frequency? Reports / logs available?
- Follow-up of recommendations
- Monitoring of contractors personnel qualifications, incident record & causation.
- Records / log books



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Appendix A: Glossary of Terms / Supporting Definitions

Company employee:

Any person employed by and on the payroll of the reporting Company, including corporate and management personnel specifically involved in exploration and production. Persons employed under short-service contracts are included as Company employees provided they are paid directly by the Company

Contractor:

A 'Contractor' is defined as an individual or organisation performing work for the reporting company, following verbal or written agreement. 'Sub-contractor' is synonymous with 'Contractor'.

Contractor employee:

Any person employed by a Contractor or Contractor's Sub-Contractor(s) who is directly involved in execution of prescribed work under a contract with the reporting Company

Lost workday case (LWDC):

Any work related injury or illness other than a fatal injury which results in a person being unfit for work on any day after the day of occurrence of the occupational injury. 'Any day' includes rest days, weekend days, leave days, public holidays or days after ceasing employment.

Occupational illness qualifying as occupational injury:

Any abnormal condition or disorder caused by exposure to ambient factors associated with the work, for example, acute or chronic illness or disease caused by inhalation, absorption, ingestion or direct contact.

Hearing loss, malignancies, back injuries or other joint and muscular disorders resulting from repeated stress are other examples of occupational illnesses which should generally be included as occupational injuries. Not included are illnesses resulting from infectious diseases (malaria, typhoid, cholera, etc.) or from food poisoning, seasickness and like ailments.



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Occupational injury:

An occupational injury is any injury such as a cut, fracture, sprain, amputation, etc., which results from a work accident or from a single instantaneous exposure in the work environment. Conditions resulting from animal bites, such as insect or snakebites, and from one-time exposure to chemicals are considered to be injuries.

Appendix B: Criteria For Measuring Performance

A. REACTIVE KPIS

Item No.	Parameter	KPI	Target (Year)	Actual	Performance	Remarks
1 (points 8)	Fatalities	Number of fatalities (company and contractor employees)				
2 (points 8)	Lost Time Incidents	Lost Time Injury Frequency (LTIF)				
3 (points 6)	Spills	Number and volume				
4 (points 6)	Waste	Type & amount. Percentage of achievement against Objectives & Targets				
5 (points 6)	Emission Gases	Calculated estimate of CO, CO ₂ , SO _x , NO _x , CH ₄ and VOC emissions (mtonnes) to air.				
6 (points 6)	Effluents	Calculated estimates from samples analysis taken for all the parameters				

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B. PROACTIVE KPIS

Item No.	Parameter	KPI	Target (Year)	Actual	Perfor- -mance	Remarks
1 (points 8)	HSE Audits / Inspections	% of planned HSE Audits/inspections executed. Follow up and implementing recommended actions.				
2 (points 7)	HSE Training	Number of trained personnel against the training plan. Number of training courses conducted against the training plan. Quality and type of courses.				
3 (points 6)	Near Misses	Number of Near misses reported & closed out				
4 (points 10)	Risk Identification & assessment	Number of New/Modified Tasks, Identified and Assessed				
5 (points 10)	HSE Impact Assessment (HSEIA)	Number of projects with EIA completed against total projects/modifications that require an EIA.				
6 (points 7)	Emergency drills/exercises	Number of exercises conducted against the plan				
7 (points 5)	HSE Campaigns	Number of campaigns against plan				
8 (points 7)	Management of Contractors	Prequalification and performance				